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AUTHOR Johnston, Lloyd D.; And Others
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ABSTRACT

This paper presents selected research findings from Monitoring the Future, an annual series of national surveys focusing on lifestyles and drug use among representative samples of American high school seniors that has been conducted every year since 1975. The presentation focuses on two issues: aspects of lifestyle currently associated with drug use, and changes in lifestyle orientations over the past decade which help to explain some of the observed shifts in the prevalence of drug use. After an introductory discussion of the research design for Monitoring the Future, the paper presents and discusses a series of demographic tables that show cross-sectional relationships between several forms of drug use and the following characteristics: (1) deviance; (2) propensity for risk taking; (3) religious commitment; (4) attachment to school; (5) time spent out of the home; (6) healthy lifestyle orientation; and (7) counter culture orientation. The last table is a measure of the cumulative variance explained by lifestyle factors. These results suggest that several forms of licit and illicit drug use are related to a wide array of different lifestyle characteristics. (TE)

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Lifestyle Orientations in Late Adolescence and Patterns of Substance Abuse

Lloyd D. Johnston
Patrick M. O'Malley
Jerald G. Bachman

Institute for Social Research
The University of Michigan
Ann Arbor, Michigan

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New Orleans Paper

The research findings we are going to share with you today derive from a series of ongoing national surveys focusing on lifestyles and drug use among American young people. The series is called Monitoring the Future, and it has at its core large-scale annual surveys of representative samples of American high school seniors, beginning in 1975 and continuing every year since. While there are other features of the design, including continuing follow-ups of each graduating class for some years after high school, we plan to restrict ourselves in the present paper to the senior-year data which have been gathered from the last eleven graduating classes; and we will focus particularly on two issues:

1. What aspects of lifestyle are currently associated with drug use--including the use of licit drugs (alcohol and cigarettes) and illicit drugs; and

2. Have there been changes in such lifestyle orientations over the past decade which may help to explain some of the observed shifts in the prevalence of drug use.

Research Design

Let us begin by saying a few words about the design and nature of the study. Monitoring the Future has for some years now provided an annual national assessment of changes in (among other things) illicit drug use, alcohol use, and cigarette smoking among American high school students--and more recently among American college students and other young adults generally (Johnston, O'Malley, and Bachman, 1987). We also monitor a number of other phenomena which may be of particular interest to epidemiologists, including tickets and accidents which occur while under the influence of alcohol, marijuana, or other drugs; frequency of driving after drinking and of being a passenger with a drinking driver; frequency of seatbelt usage; use of medical services for various purposes; self-reported frequency of certain symptomatology; height and weight; and the use of smokeless tobacco.

The design of the study is described at length elsewhere (references) so we will give only a brief sketch here. In the spring of each year we survey some 17,000 seniors located in roughly 135 public and private schools nationwide. The sampling design is such as to yield a representative national sample of high school seniors in the coterminous United States. Entire classrooms are sampled within schools, and self-administered questionnaires are given in the classroom setting during a normal class period. Survey Research Center interviewers conduct all of the administrations, and extensive efforts are made both to assure confidentiality and to reassure the respondents on the issue of confidentiality. A number of analyses, reported elsewhere, give evidence of a high level of reliability and validity in the answers obtained regarding the sensitive topic of drug use. (References)

The content of the questionnaires is extremely broad; and in large part that is possible because the very large sample size allows us to use five different questionnaire forms, each assigned to a random subsample of one-fifth of the 17,000 seniors. The key drug use measures are contained in all forms, as are a number of background and demographic measures; but most of the lifestyle measures to be discussed in this paper are included in only a single form (having an N of perhaps 3,400 in a given year). However, because a number of the lifestyle measures were intentionally placed together in the same questionnaire form, it is possible to examine their degree of correlation with each other, as well as with the key measures of drug use.

Background Considerations

Since we will be using the term "lifestyle orientation" repeatedly in this paper, a few words about its definition are appropriate. We consider the term to reflect a constellation of attitudes, behaviors, and beliefs which find expression in one or more domains of daily life. So, for example, one may hold a set of values and attitudes about maintaining good health which are reflected not only in measures of attitudes and beliefs, but in actual behavioral patterns in several domains--such as eating habits, exercise habits, sleep habits, etc. We might call this a healthy lifestyle orientation. Another lifestyle orientation may be one of deviance or rule-breaking, while still a third might be one associated with being in the counter-culture.

We plan to look at these three, as well as a number of others--some of which may influence a smaller range of daily life--and to consider them against several measures of drug use: specifically, marijuana use, the use of other illicit drugs taken as a class, the use of cocaine specifically, cigarette use, and alcohol use.

It should be noted that, at least since the drug epidemic of the last 20 years began, there has existed a high degree of positive association among these various licit and illicit drug using behaviors. Smokers are more likely to drink and use all of the illicit drugs than nonsmokers; drinkers are more likely to smoke and use the illicit drugs; and users of any of the illicit drugs are considerably more likely than nonusers to smoke, drink, and take other illicit drugs (Johnston, 1973;___). Because these behaviors tend to relate quite strongly to each other, it is not surprising that they also tend to relate in similar ways to various external variables, including most lifestyle measures. There are a few exceptions of importance, and these will be noted; but in the main we will be seeing fairly parallel patterns of association.

Results

First, we will examine in the Class of 1986 some of the cross-sectional relationships between these several forms of drug use and various lifestyle characteristics, beginning with some relationships which have previously been reported to exist both by this research team and by others. (See Table 1.) We will use summary statistics for most of the discussion here because of the large number of pairwise associations to be discussed; more specifically, we will use product moment correlations. We recognize that the skewness of some of the measures makes their use somewhat less than optimal at times, but believe that they will fairly accurately reflect the general story for purposes of the current discussion.

Deviance [TABLE 1]

Certainly a consistent finding in past research has concerned the relationship between drug use and deviance or delinquency (References). We have two summary measures of delinquency based on self-report measures: an index of interpersonal aggression (including armed and unarmed assault and also battery), and an index of crimes against property (including theft, arson, and vandalism). The general association has been reported previously (Johnston, 1973; and include Osgood et al), and we continue to find a strong association between these two measures of delinquency and all forms of drug use, licit and illicit. (Incidentally, no offenses used in the indexes directly concern the use, possession, or sale of drugs.) Clearly drug use is part of a deviant lifestyle. Other forms of rule-breaking, such as cutting school and cutting classes in school (to be discussed below), also relate strongly to drug use.

Propensity for Risk Taking [TABLE 2]

Given the dangers associated with most kinds of drug use, it seemed to us likely that a general propensity for risk-taking would predict to drug using behaviors. The few measures that we included to measure this tendency have supported this hypothesis. Two attitudinal questions, which were embedded in a larger set of agree-disagree statements, said "I get a real kick out of doing things that are a little dangerous," and "I like to test myself now and then by doing things that are a little risky." These two items correlate .64 with each other, and each bears a moderate positive relationship to all of the drug measures, with the strongest association occurring for alcohol consumption (See Table 1). A behavioral measure of risk avoidance, seat belt usage--which has the expected negative correlation with the attitudinal measures, but one of only -.10--shows a quite similar set of negative correlations with the various drug use measures. [1] (The major difference in the pattern is that seatbelt use is more strongly correlated with cigarette smoking than are the attitudinal measures.)

Riding with a drunk driver or driving while drunk themselves correlate strongly with the various drug use measures, but particularly with measures of alcohol and marijuana consumption. While no surprise, it is a reminder of one way in which drug users are leading more risky lives. In fact, the convergence of much more drunk driving with less seatbelt usage is particularly troublesome.

Religious Commitment [TABLE 3]

Given the strong relationship between deviance and all forms of drug use, it may come as no surprise that drug use bears a moderate negative relationship to the student's degree of religious commitment--as measured by frequency of attendance of religious services and the rated importance of religion in one's own life. (What may come as more of a surprise is the fact that the delinquency measures have only very modest negative relationships to the religiosity measures--all under .13.) This relationship between drug use and religiosity is a previously reported relationship [References] which still remains today; however, the strength of the relationship has declined somewhat during the past decade (Bachman, O'Malley, and Johnston, 1986; and O.P. 21). (Since religiosity represents a broad value orientation which is often reflected in everyday behavior, we have included it under our definition of lifestyles without any intention of trivializing its importance.)

Attachment to School [TABLE 4]

Still another important lifestyle characteristic for students is the degree to which they are attached to, and invested in, school. We have already mentioned that cutting school and cutting classes are strongly associated with all forms of drug use. College plans and academic grades are negatively correlated with drug use, as well, and these associations are especially strong for cigarette smoking. To a lesser extent, the student's self-concept of his or her school ability is also associated with drug use (data not shown). Again these are associations previously recognized and reported in the literature [AJPH '81; and O.P. 21]. Also, the less the teenager likes school and puts time in on homework, the more likely he or she is to use drugs.

Less well recognized is the fact that drug use of all kinds tends to be negatively correlated with involvement in extracurricular activities, although the association differs in strength for the different types of activities. (Because of sizable sex differences in participation rates for various extracurricular activities, all of the correlations have been calculated separately for males and

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1. Only the measure of seatbelt usage while a passenger is shown here; it correlates .88 with seatbelt usage while driving, but the latter measure is limited to those respondents who drive.

females. See Table 4A.) In sum, youngsters who are more committed to, and involved in, the formal and informal life of the school are less likely to be involved in the various forms of licit and illicit drug use.

Time Spent out of the Home [TABLE 5]

We have discussed the importance of attachment to two important socializing institutions--church and school--to most forms of drug use. Unfortunately, we have fairly limited information on perhaps the most important socializing institution--the home. What we do have suggests that social class has extremely little association at present with drug use, the exception being cigarette smoking, where there is a very modest negative correlation (-.08) with both mother's education and father's education. But as we have reported earlier, [AJPH article] another dimension of home life--how many evenings the youngster goes out per week--bears a quite strong correlation to all forms of drug use. Frequency of dating is not as strongly related, though still related; however, frequency of going to parties, frequency of going to bars, and frequency of going to rock concerts all relate quite strongly to all forms of drug use. It is quite clear from these findings, and from others we have previously reported on the reasons that young people give for using illicit drugs (Johnston and O'Malley, 198_), that frequency of going out of the parental home--and specifically going out to social occasions with peers--is an important behavioral pattern associated with drug use of all types. It is an important part of the overall lifestyle of most teenagers who drink and use illicit drugs. Even "riding around in a car just for fun" correlates positively with the drug use measures, as does "getting together with friends informally" with the activity unspecified.

There are some leisure time pursuits which are not associated with the various types of licit and illicit drug use, you may be glad to know, including the frequency with which they watch television, go to the movies, do art or craft work, do work around the house, go shopping, or spend at least an hour per day of leisure time alone. (Data not shown.)

Working While in School

One other type of activity to which non-school time is frequently devoted by high school students is paid work. We have previously shown that working--contrary to what many would have predicted--actually bears a positive association with all forms of drug use (Bachman, Bare, and Frankie, 1986). However, an assessment of drug use at earlier ages (using retrospective questions on age at first use) showed that those who work in senior year are more likely to have been earlier users: thus the association between drug use and work is at least in part the result of self-selection. (The same is likely true for at least some of the relationships with leisure time variable discussed, such as going to bars, parties, etc.)

Healthy Lifestyle Orientation [TABLE 6]

During the 70's it was apparent that there was evolving in this country a new level of awareness of the impacts of lifestyle or physical health, and that indeed a movement toward healthier lifestyles was taking place among a fair number of people. The evidence ranged from the rise of jogging, to the public disparagement of fast foods and food additives, to the evolution of new dietary habits. In 1979 we entered a set of questions into the study to try to see to what extent they could capture a healthy lifestyle orientation, and also to see to what extent it would show a meaningful relationship to drug use of various kinds. We developed a six-item index (derived from a larger set) with three questions about dietary habits, two about exercise, and one about the amount of sleep usually obtained. All of these measures are positively intercorrelated, with the average inter-item correlation among them being .32. They also all prove to have a rather modest negative correlation with drug use, the strongest such correlation occurring for cigarette smoking. Overall, then, our Healthy Lifestyle Index turned out to have only modest

explanatory power though it does do somewhat better for cigarettes than for illicit drugs or alcohol.

Further, there is some question about the direction of causation of even the modest relationships observed here, since drinking and drug use (and the activities associated with them, such as staying up late "partying") could well lead to less sleep, skipping breakfast (which, in turn, may reduce fruit consumption), etc. Of course, the issue of direction of causality can be raised in relation to various of these lifestyle characteristics which turn out to be associated with drug use--in particular, with some of the associated leisure time activities.

Before leaving the issue of healthy lifestyle orientation, however, we should mention that we have reported elsewhere rather strong evidence that changing health concerns about particular drugs have played an important role in determining changes in the use of those drugs [JH & SB in press, also O.P. 19]. While not part of a broader healthy lifestyle orientation, it is clear that health related beliefs are important determinants in this class of behaviors.

Counter Culture Orientation [TABLE 7]

The last lifestyle orientation we will try to cover here is one which evolved in the late 60's and early 70's when it bore a strong relationship to some, but only some, of the drug use measures. It is referred to as membership in, or adherence to, the counter culture. Perhaps the strongest, indeed central, component of this lifestyle was opposition to America's war in Vietnam. Many young people also expressed their adherence to the counter-culture lifestyle in their clothes and personal grooming habits, their music preferences, their involvement in social protests, their rejection of parental values, and their propensity to use certain drugs--marijuana, LSD, and the other psychedelics, in particular. (References) "Turn on, tune in, and drop out," invoked Timothy Leary, one of the earliest gurus; and indeed a fair proportion of a generation did.

It seems incontestable that the Vietnam War, and its relevant social and political impact on the young people of the country, played an exceptionally important role in the advent of an unprecedented use of illicit drugs in the society. Many researchers have documented the statistical relationship between the counter-culture measures and illicit drug use [References]. Johnston (1973) showed that the association was primarily with marijuana and the psychedelic drugs, not cigarettes, alcohol, narcotics, etc.; and that this lifestyle orientation was relatively uncorrelated with a delinquent orientation, which was already recognized at that time as an important dimension for explaining drug use.

But, does the counter-culture orientation have much explanatory value for drug use among young people today? It is, after all, difficult to find many hippies or flower children wandering our campuses or byways, and one of the central measures of the counter-culture orientation--namely, disapproval of the Vietnam War--seems almost irrelevant to contemporary teenagers.

Recognizing, as we did, the importance of the counter-culture orientation for understanding drug use in the mid-1970's, when this study was launched, we tried to include a number of questions which would be useful for measuring it over time. Among those we chose were questions about their attitudes about a) hard rock music, b) the sloppiness of young people's dressing styles, c) the belief that "people should do their own thing, even if other people think it's strange", d) a measure of political alienation, e) a measure of political ideology which ranges from conservative to liberal to radical, and f) an index of agreement with parental values on a wide range of issues. Because we did not believe that attitudes about the Vietnam War would be salient, or even understandable, for forthcoming graduating classes, we did not include questions on that subject. The more general index on political alienation, however, was known to correlate .46 with a measure of anti Vietnam sentiment among a national sample of male

graduates in the Class of 1969, and it was also known to correlate quite well with several social measures of drug use in that population (Johnston, 1973).

What we now find is that most of these measures bear little relationship to adolescent drug use in 1986 (See Table 7). The beliefs that too many young people are sloppy in their dress or that people "should do their own thing" regardless, both correlate less than + .09 with any of the measures of drug use. The three-item index of political alienation, which correlated .23 with marijuana use among males in the Class of 1969 (measured in 1970), has virtually no correlation with drug use in 1986. In fact, the only one of the counter-culture indicators which still shows any association with the drug use measures is a statement that "there is too much hard rock music on the radio these days". However, this negatively loaded item today bears virtually no association with political alienation, suggesting that the constellation of factors known earlier as the counter-culture orientation has largely dissipated. This finding is consistent with the argument we have been putting forward in public for some time--that the passing of the Vietnam War era was an important factor in the gradual decline of illicit drug use which began in the late 1970's. Certain types of drug use were an integral part of the counter-culture (which sprang up largely in response to the war). With the dissipation of that counter-culture we have seen the removal of one of the important catalysts for illicit drug use.

An examination of the cross-time correlations between all of these measures and the annual frequency of marijuana use helps to make the point. [TABLE 8] Between 1976 and 1986 the correlations fell:

- from -.31 to -.23 for "there's too much hard rock music . . ."
- from -.19 to -.08 for "too many young people are sloppy in their dress"
- from .17 to .05 for "people should do their own thing . . ."
- from .06 to .01 for the index of political alienation (recall that the drop is much greater since 1970.)
- from .24 to .12 for the measure of liberal/radical (versus conservative) political ideology
- from -.24 to -.20 for a measure of value integration with parents.

In sum, a lifestyle orientation which bore a strong relationship to drug use in the late 60's and early 70's appears to be dissipating and therefore to be far less salient today, as memories of the war which gave rise to it fade into the past. Consistent with the notion of a decline in the counter culture have been the following several trends which we have noted in the Monitoring the Future data:

- An increasing proportion of young people now express the sentiment that there is too much hard rock music these days (an increase of .23 s.d. since 1976).
- Fewer are politically alienated from the government (a decrease of .25 s.d. since 1976).
- Fewer say they disagree with their parents' values and views on a wide range of issues (a decrease of .17 s.d. since 1976).
- A shift away from the radical end of the political ideology scale.
- Evidence of decrease in social activism.

- Evidence of a decrease in concern with a range of social issues, such as ecology, overpopulation, race relations, and urban decay.

- Evidence of an increased concern with achieving wealth and status in a career.

- Evidence of an increasing willingness to work in large corporations.

This, then, is a change in lifestyles which could help to explain the gradual decline in illicit drug involvement among American young people since about 1980. We might then ask, have any of the other lifestyle orientations discussed here shifted in ways which could also help to explain the shift? In general, the answer seems to be "no". While we do not have time to discuss the observed shifts at length, we can say that:

1. The measures of delinquency show no sign of decline in this age group since 1976.

2. If anything there has been a slight shift away from religious commitment during the period--a shift which is the opposite of what would be needed to explain a decline in drug use.

3. Since about 1980 we have actually seen some rise in the propensity toward risk-taking (about .25 s.d.)--again a shift in the wrong direction.

4. Since 1979, when the questions about nutrition, exercise, and sleep were first added, there has been a gradual moving away from healthy lifestyle practices as measures by these items--once again a move in the wrong direction. (In this case, while there is no evidence of a simultaneous negative correlation, we do think that the healthy lifestyle movement of the 70's may have had some lagged effect on senior drug use, if it helped to deter them from beginning use when they were at younger ages.)

5. Since 1976 there has been rather little change in the frequency with which young people go out in the evenings (a drop of .10 s.d.) or go out on dates specifically (a .05 sd. increase). While there has been some decline since 1979 in the frequency with which they go to bars (a drop of about 1/3 s.d.), undoubtedly due to changes in drinking age laws during the period, the frequency of their going out to parties (a much more common event) has remained unchanged since 1979.

6. Even in the case of attachment to school we have not seen a strong or consistent shift in the direction necessary to help explain a decline in drug use. Measures such as cutting school, liking school, and hours of homework in 1986 are about where they were in 1976, although the proportion planning to complete college has risen some in recent years.

In sum, of the important lifestyle dimensions discussed here which relate to drug use, only one appears to have shown appreciable change which might help to explain the recent decline in illicit drug use--and that one is the counter-culture orientation.

Total Variance Explained by Lifestyle Factors [TABLE 9]

The last table we present deals with the question of how much cumulative variance can be explained using measures from all of the different lifestyle orientations discussed in this paper. The multiple regressions which gave rise to the numbers in Table 9 used a selected set of measures, as follows:

- the index of overall delinquency,

- the index of attitudes toward risk taking (but not the behaviors),
- the index of religious commitment,
- several items measuring attachment to school (including truancy, liking school, grades, college plans, and the extracurricular activities index),
- several measures of time spent out of the home (evenings out, dating, an index of "partying"[2], going to rock concerts, and hours worked),
- the healthy lifestyle index, and
- two measures of counter-culture orientation (too much hard rock, conservative-liberal-radical orientation).

Thus the multiple regressions will yield slightly conservative estimates of the variance which could be accounted for by all of the lifestyle measures. Still, they can account for 32% of the variance in the frequency of annual marijuana use (a multiple R of .57); 23% of the variance in annual use of other illicit drug use (multiple R = .48), 18% of the variance in the frequency of annual cocaine use (multiple R = .42), 22% of the variance in cigarette smoking during the past month (multiple R = .47), and a hefty 42% of the variance in the frequency of drinking in the last month (multiple R = .65). As Table 9 shows, controlling for a change of obvious background and demographic characteristics of the respondents reduces the explained variance very little.

Summary

Thus, we can conclude that the several forms of licit and illicit drug use examined here are related to quite an array of different lifestyle characteristics of young people to: deviance; risk-taking propensity; religious commitment; attachment to, and involvement in, school; time spent out of the home; and in particular to time spent in social or "partying" settings. Having a healthy lifestyle orientation shows a rather limited relationship with drug use, with the important exception of cigarette smoking; and the counter culture orientation, which once had a strong relationship with certain forms of illicit drug use, bears much less of one today.

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2. The partying index includes the items on frequency of going to parties, bars, and out with friends.

TABLE 1

Correlations of Lifestyle Variables with Drug Use Measures
High School Senior Class of 1986

DELINQUENCY

	Mar (Ann)	Oth Illic (Ann)	Coc (Ann)	Cig (30d)	Alc (30d)
Total Delinquency Index	37	29	27	24	36
...Interpersonal Aggression Index	21	19	19	21	26
...Property Crime Index	37	29	26	21	34

TABLE 2

Correlations of Lifestyle Variables with Drug Use Measures
High School Senior Class of 1986

RISK TAKING PROPENSITY

	Mar (Ann)	Oth Illic (Ann)	Coc (Ann)	Cig (30d)	Alc (30d)
Risk Taking Index (2 attitudes)	20	19	12	15	25
...Kicks doing dangerous things	19	18	12	14	23
...Test self by risky things	18	16	10	13	23
No seatbelt use as passenger	18	15	11	21	20
Riding with a drunk driver	33	23	18	25	45
Driving drunk	35	25	21	28	48

TABLE 3

Correlations of Lifestyle Variables with Drug Use Measures
High School Senior Class of 1986

RELIGIOUS COMMITMENT

	Mar (Ann)	Oth Illic (Ann)	Coc (Ann)	Cig (30d)	Alc (30d)
Religious commitment index	-25	-21	-20	-18	-21
...Attendance	-22	-17	-18	-18	-18
...Importance	-22	-20	-17	-14	-19

TABLE 4

Correlations of Lifestyle Variables with Drug Use Measures
High School Senior Class of 1986

ATTACHMENT TO SCHOOL

	Mar (Ann)	Oth Illic (Ann)	Coc (Ann)	Cig (30d)	Alc (30d)
Truancy index	37	31	29	26	33
Liking school	-21	-17	-15	-22	-24
Academic grades	-21	-15	-13	-22	-16
College plans	-13	-14	-12	-23	-07
Extracurricular activities	-16	-14	-15	-21	-06
...Publications	-04	-05	-07	-07	02
...Performing arts	-15	-10	-11	-12	-15
...Athletic teams	-03	-06	-06	-17	05
...Other activities	-18	-15	-16	-16	-08

TABLE 4A

**Correlations of Extracurricular Variables with Drug Use Measures
High School Senior Class of 1986, by Sex**

		Mar (Ann)	Oth Illic (Ann)	Coc (Ann)	Cig (30d)	Alc (30d)
Extracurricular Activities Index						
	Males	-14	-14	-14	-21	-03
	Females	-16	-14	-16	-20	-06
Publications						
	Males	-05	-07	-08	-09	-02
	Females	-01	-03	-05	-05	06
Performing arts						
	Males	-13	-08	-08	-11	-15
	Females	-14	-11	-12	-12	-10
Athletic teams						
	Males	-04	-04	-04	-19	02
	Females	-05	-09	-09	-15	-00
Other activities						
	Males	-15	-18	-16	-14	-02
	Females	-19	-13	-15	-19	-09

TABLE 5

Correlations of Lifestyle Variables with Drug Use Measures
High School Senior Class of 1986

TIME SPENT OUT OF THE HOME

	Mar (Ann)	Oth Illic (Ann)	Coc (Ann)	Cig (30d)	Alc (30d)
Frequency of going out	28	25	20	21	35
Frequency of dating	16	20	15	14	19
Frequency of going to parties	34	27	22	20	50
Frequency of going to bars	28	24	22	24	47
Freq. of riding around for fun	21	19	12	18	28
Freq. of going to rock concerts	28	23	18	15	29
Freq. get together with friends	20	15	11	13	28
Number of hours working per week	13	12	09	16	18

TABLE 6

Correlations of Lifestyle Variables with Drug Use Measures
High School Senior Class of 1986

HEALTHY LIFESTYLE ORIENTATION

	Mar (Ann)	Oth Illic (Ann)	Coc (Ann)	Cig (30d)	Alc (30d)
Healthy lifestyle index	-12	-12	-07	-21	-11
...having breakfast	-10	-13	-08	-14	-10
...eating green vegetables	-06	-06	-03	-07	-08
...eating fruit	-10	-09	-03	-13	-12
...vigorous exercise	-08	-06	-05	-18	-03
...getting 7 hours of sleep	-08	-10	-06	-13	-14
...participation in sports	-02	-02	-03	-16	-04

TABLE 7

Correlations of Lifestyle Variables with Drug Use Measures
High School Senior Class of 1986

COUNTER CULTURE ORIENTATION

	Mar (Ann)	Oth Illic (Ann)	Coc (Ann)	Cig (30d)	Alc (30d)
Too much hard rock these days	-23	-17	-13	-12	-25
Too many young people are sloppy	-08	-08	-07	-03	-08
People should do their own thing	05	06	04	08	04
Political alienation index	-01	01	01	03	-04
Political preference (radical)	12	10	08	07	08
Value integration with parents	-20	-18	-11	-16	-17

TABLE 8

Correlations of Counter Culture Orientation Variables with Marijuana
High School Seniors Classes of 1976, 1980, and 1986

COUNTER CULTURE ORIENTATION	(1970)	1976	1980	1986
Too much hard rock these days		-31	-31	-23
Too many young people are sloppy		-19	-15	-08
People should do their own thing		17	13	05
Political alienation index	(23)	06	01	-01
Political preference (radical)		24	17	12
Value integration with parents		-24	-25	-20

TABLE 9

Percent Variance Explained by Lifestyle Factors Taken Collectively
High School Senior Class of 1986

	Mar (Ann)	Oth Illic (Ann)	Coc (Ann)	Cig (30d)	Alc (30d)
Total variance explained by lifestyle factors	32	23	18	22	42
Marginal variance explained by lifestyle factors, controlling background factors (sex, race, number of parents in home, parental education, urbanicity, region)	29	21	16	20	38